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ABSTRACT

This study addressed, within the context of Australian public libraries, how people with disabilities can more easily share in the new world of instant information and communication offered by the Internet. Eight public libraries from Victoria and one from Wagga Wagga participated. The sample consisted of 85 adults with a variety of physical and intellectual disabilities. The first stage of data collection involved the evaluation of a range of different equipment considered suitable for public settings. The second stage saw the development of training focusing on the equipment recommended as a result of the evaluation stage. This paper presents results in the following areas: (1) evaluation of adaptive equipment and software, including Intellikeys, Enhancing Internet Access (EIA), trackballs, and the Opera browser; (2) selecting appropriate technology, including criteria to be considered, characteristics to avoid, and recommended equipment and software related to these criteria; (3) training for EIA and Opera; (4) training recommendations; and (5) access policies. Key project recommendations include: adaptive equipment/software need to be selected with care; attention needs to be paid to associated accessibility issues; disability awareness kits can play a valuable role for library staff; library staff require training and reference guides to use adaptive equipment/software effectively; and partnerships with local disability organizations should be established. (Contains 13 references.) (MES)

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Levelling the Playing Field: The Role of Libraries in Providing Online Services for People with Disabilities

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Proceedings

Levelling the Playing Field: The Role of Libraries in Providing Online Services for People with Disabilities

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How can people with disabilities more easily share in the brave new world of instant information and communication offered by the Internet? A recent study by the State Library of Victoria/VICNET and Information and Telecommunications Needs Research group (ITNR) - a joint venture by Monash and Charles Sturt Universities - has addressed this question in the context of Australian public libraries. The project is funded by the AccessAbility Program, Commonwealth Department of Communications, Information Technology and the Arts and sponsored by AAPT Limited. Key objectives include the selection of a core set of adaptive equipment, suited to people with a range of different disabilities for use in public settings, particularly in public libraries; the development of related training for users and librarians alike; and the identification of standards and policies for achieving appropriate levels of online public access by disability groups[1]. This paper will set out the project's findings, with particular emphasis on the role that training can play in improving online access in public libraries.

It has become a commonplace in academic and popular literature that the Internet and other online services open up windows of opportunity for people to participate in the new information age. (See, e.g., the Broadband Services Expert Group's *Networking Australia's Future* 1995;St Clair, Muir and Walker 1996; Johnson and Moxon 1998). More than this, many writers (e.g., Newell 1994: Astbrink 1995; Royal National Institute for the Blind 1998; European Commission DGXIII, n.d.) suggest that such new technologies offer particular benefits and potentialities for people with disabilities. A prevalent view is that the opportunities for communication and information acquisition are likely to be significantly expanded through online services, especially for people who are isolated by their disabilities. This is particularly the case in rural Australia, where distance often exacerbates isolation (Wolstenholme and Stanzel 1997). The Australian Bureau of Statistics' most recent *Survey of Disability, Ageing and Carers* (1998) estimated that 19.3% of the Australian population (or 3,610,300) persons had a disability. Clearly, the possibility that the Internet might improve the information access of such a large section of the population, many of whom have been marginalised by long-established forms of media, is a matter of considerable social importance.

Enthusiasm has prompted some extravagant claims for the new technologies. More than one writer has asserted that the Internet and related media possess, in their own right, the power to undo problems of social inequity (Harris 1997, cited by Blake 1999, p.12; Seale 1998, p.260). The problem extends further than mere hyberbole, however. It is also important to note the issues that are not being addressed in any systematic way at present. For example, a thorough literature search revealed no major study of the information needs and information-seeking behaviour of people with disabilities, either in Australia or overseas.

Given this omission, and ITNR's longstanding emphasis upon user-centred approaches to research, we chose to set the evaluation of adaptive equipment within the broader context of the self-defined needs of people with disabilities. The testing of equipment by users was carried out in conjunction

with structured interviews aimed at establishing each participant's level of use of a range of equipment from computers to telephone answering machines, as well as knowledge of online services. Other questions addressed users' information-seeking and communication behaviour, including likely topics of interest for Web searches. This work was complemented in two ways: by sessions with participants trialling approaches to training, related to the equipment and software which had been selected from the first stage of the project; and by focus group discussion and demonstrations involving public library staff. The various sessions have generated rich data concerning the information-seeking and communication behaviour of people with disabilities, as well as the utility to them of particular pieces of equipment and software, as well as key training issues pertinent to the use of selected equipment and software in a public library setting.

Method

Nine public libraries were involved in the project. Eight were from Victoria; the ninth, the Wagga Wagga Library, is the headquarters of the Riverina Regional Library. The latter library service was included because of the involvement of Charles Sturt University in ITNR. The selection of Victorian libraries was based on the requirement to include a range of different public library types and a mix of socio-economic, rural and urban areas. Participants were found mainly through community organisations, particularly those which work with people with disabilities, e.g., Access for All Abilities, a joint project of the Moonee Valley and Brimbank City Councils funded by the Victorian Department of Sport and Recreation, the Arthritis Foundation of Victoria, and the Royal Victorian Institute for the Blind.

The following sections describe the sample - including gender, age, the disabilities involved, and the locations where participants took part in the project - along with an overview of the components of the research, including the instruments used for data collection.

The Sample

The sample consisted of 85 people with disabilities, aged 18 and over, of whom 43 (50.6%) were males and 42 (49.4%) were females. Fifty of these participants were involved in the project's initial evaluation of equipment, while another 35 took part in the later sessions which were concerned with developing methods of training for the equipment to be recommended by the project.

In addition, 17 public librarians took part in focus groups which discussed issues concerned with training (both for librarians and people with disabilities). This gives a total of 102 participants who took part in the project.

Age of Participants

Table 1 shows the age groups of participants.

Table 1

Sample Participants by Age

Age group	Number of participants	% of participants
18 - 24	16	18.8
25 - 34	9	10.6
35 - 44	14	16.5
45 - 54	13	15.3
55 - 64	9	10.6

65 +	24	28.2
Total	**85**	**100.0**

As can be seen from Table 1, the 18 - 24 age group is larger than might be expected, probably because of the large number of people in that age group who have intellectual disabilities and whose education and training is being extended through organisations such as Leisure Action, a Division of the Spastic Society of Victoria. The largest group is in the 65+ age bracket, for two reasons: the common incidence of disability amongst older people, and the broader age span involved.

Location of Participants

Of our participants with disabilities, 50 (58.8%) took part at public libraries in the Melbourne metropolitan areas (Box Hill, Maribyrnong, Port Phillip, State Library of Victoria, Sunshine), while 35 (41.2%) were involved at regional, rural or semi-rural libraries in Victoria and NSW (Bairnsdale, Cranbourne, Hamilton, Wagga Wagga.).

Disabilities

The project sought participation from people with a variety of disabilities, both physical and intellectual. Thirty-seven participants (43.5%) had intellectual disabilities often resulting from Down's syndrome or cerebral palsy, which sometimes caused physical disabilities as well; 48 participants (56.5%) had physical disabilities such as low vision, low hearing, or arthritis. Table 2 sets out the disabilities in the sample in detail.

Table 2

Sample Participants by Disability

Disability	**Number of Participants**	**% of participants**
Intellectual	21	24.7
Sight	17	20.0
Intellectual/physical	16	18.8
Physical	14	16.5
General ageing	4	4.7
Hard of hearing/sight	4	4.7
Hard of hearing/ physical	2	2.4
Total	**85**	**100.0**

Data Collection

Qualitative data methods were used so as to capture the perspectives of the participants. Action research, which enables fieldwork to be adjusted so that the best possible solutions to problems can be obtained, was also used where this was appropriate - for example, in the testing of equipment with people with a great range of disabilities, and in trialling appropriate training for the equipment to be recommended.

There were two major stages to the data collection. The first stage involved the evaluation of a range of different equipment considered suitable for public settings; the second saw the development of training focussing on the equipment we had decided to recommend as a result of the evaluation stage.

Stage 1

There is a very big range of adaptive equipment available, not all of which we could test. It made sense to seek the advice of experts. Both international and national experts were consulted, e.g., from the Assistive Technology Centre, Lunenberg, Nova Scotia, the Independent Living Centre (Yooralla Society of Victoria) and Regency Park Rehabilitation Engineering in South Australia, from where we hired the equipment which we tested. The AccessAbility Online Resource was consulted for ideas on good products. While we also searched for reviews of products, the advice of experts has proved to be the most valuable source for our decision making. Table 3 sets out the adaptive equipment and software tested in the project and the numbers of participants who were involved in each case. In some cases more than one item was tested with a particular participant, resulting in a higher total than would be expected for the 50 participants who were involved in the first stage of the project.

Table 3

Adaptive Equipment and Software Tested in the Project

Equipment or software	**Number of participants**
Intellikeys, a large keyboard with a selection of overlays suited to different disabilities	17
Enhancing Internet Access (EIA), a touch screen and simplified browser	13
Opera browser, providing enlarged and enhanced text	12
Key guard for standard keyboard	7
Switch adaptor for standard mouse	5
Anir mouse, an alternative mouse which looks like a joy stick	5
Big keys, an alternative keyboard, with large bright keys	3
PC Trac Deluxe/Kids Trac (Microspeed trackball)	3
PW Web Speak, a screen-reading program	3

Genius trackball	2
Head stick	2
Small PC keyboard (Cherry keyboard)	1

In evaluating the equipment and software, data collection began with an interview seeking detailed background information about the lives of each participant, especially in relation to their disabilities, their information needs, their recreational interests and their experiences with technology. Each participant was then tested on the standard equipment, before being introduced to, and tested on, at least one piece of adaptive equipment or software. The tests followed a structured procedure. The session concluded with further interview questions which focused particularly on participants' reactions to their experiences on the Internet - both with the standard and adaptive equipment - and the recording of the interviewers' observations on their participants' disabilities and degrees of comfort with the Internet.

After each group of interviews, the interviewers/observers (mostly working in pairs) recorded their comments on the performance of the equipment, its flexibility across disabilities, and the problems it presented. Librarians' observations, especially their views on the practical issues involved in offering each piece of equipment, were also recorded. The data were analysed by NUD.IST (Non-numerical Unstructured Data. Indexing Searching and Theorising) software.

Stage 2

In the second stage of the project, focus centred on training in the library setting for the equipment and software which we had decided to recommend. The process was adapted to the particular equipment or software involved. For example, EIA has its own tutorial and so the approach was to evaluate how well that worked for participants. On the other hand, Intellikeys, trackballs and key guards are relatively easy to use and require little instruction. It was the team's decision, therefore, to devote most energy to the browser, Opera, which we consider has the possibility of providing considerable assistance to people with disabilities and to be manageable in busy public settings.

The other component of Stage 2 was the trialling of the Opera browser with public librarians. This was followed by three focus groups which explored issues of training for Opera specifically, and for people with disabilities, in general. More detailed description of the method, used in Stage 2, is included in the 'training' section of the results, below.

Results

Evaluation of Adaptive Equipment and Software

The equipment and software recommended as a result of the project include: Intellikeys, EIA, Microspeed trackballs, the Opera browser, and possibly PW Web Speak, the assessment of which is not completed at the time of writing. A brief description of the equipment and software follows, along with reasons for recommendations.[2]

Intellikeys: is a large keyboard which comes with a selection of overlays suited to different types and levels of disabilities. We used the Internet Explorer-enabled overlay. It is a very flexible tool and very easy for librarians to support, as each overlay can simply be removed and replaced by another which might be more suited to a particular user, e.g., the alphabetical overlay for some people with intellectual disabilities. Overlays can also be specially designed with different functions or user needs in mind. For example an Internet overlay, which we used, has been designed at Regency Park.

Enhancing Internet Access (EIA): consists of a touch screen and a simplified web browser. The

browser is compatible with Internet Explorer and offers access to web sites, search engines and email. The touchscreen interface is clear and allows the user to avoid the problems of mouse control. EIA also has an on-screen 'pop-up' keyboard, which can be used as a substitute for the standard keyboard if desired.

Trackballs: perform the same function as a mouse, except that the ball is on the top of the device rather than the bottom. As a consequence, the ball can be moved around directly with the fingertips. Trackballs are useful because they do not require the user to move their hands much, thus limiting the pain of those suffering from RSI or severe arthritis. They are also more solid and stable than a mouse. We found that some trackballs perform much better than others.

Opera: (www.opera.com) This browser has a number of features well suited for use by those with vision impairments as well as those with certain physical disabilities. To begin with, no functions are exclusively dependent upon a mouse. Text and images can be enlarged or reduced, images and backgrounds switched on and off, and hyperlinks navigated: all from the keyboard. Not only can it increase the size of the font for a web site but, in conjunction with Windows 98, Opera also has the facility to increase the size of menu bars, dialogue boxes, and scroll bars. The number of buttons (or icons) can be reduced to a basic few, and different button sets (including large or text only buttons) can be imported. Their colours can be changed. The font size on web sites is very easily manipulated by any user with the plus and minus keys on the number keypad of the keyboard, and different formats (e.g., for high-contrast) are easily installed and turned on and off.

Criteria for selecting appropriate technology

The development of criteria for selecting appropriate technology was an important and difficult step which emerged from the evaluation of the equipment and software. No one piece of equipment can cater satisfactorily to all people's needs. Compromises will have to be made when the final choices are made. Below is a list of criteria which should be considered and characteristics to avoid, followed by a summary of recommendations. A more detailed account of the criteria to use in setting up a flexible work station, in a public setting for people with disabilities, is available elsewhere. [3]

Criteria to be considered

- Ability to enlarge fonts, buttons, dialogue and drop-down boxes, and scroll bars.
- Keyboards which offer large letters, QWERTY and ABC arrangement, and choice of flat or raised positions.
- Simplified browser format or keyboard adapted commands.
- A trackball which is stable and solid with click buttons not too far from the ball. A ball which is not too high.
- An audio browser which is sufficiently useful for users who are blind, but which is sufficiently simple for support to be provided in busy public settings.

Characteristics to Avoid

- Equipment with a toy-like appearance, often viewed as patronizing by older adults and adults with disabilities
- Keyboards that deviate too much from the standard keyboard, or that lack keys essential to Internet use (e.g. the tilde key)

Our recommended equipment and software related to these criteria

- We found Opera to be the most useful program for changing the sizes of fonts, background and user interfaces.
- Both Intellikeys and EIA have good keyboard options. EIA has the advantage of offering solutions for people with quite poor muscular control.

- EIA and Opera both have potential as simplified browsers. Choice depends on whether emphasis is given to sight or physical disabilities. Combined with Intellikeys, Opera could provide a solution most responsive to a range of disabilities.
- Microspeed trackballs are well designed and effective.
- PW Webspeak may meet the criteria and be chosen as the audio browser.

Training for Recommended Equipment and Software

As mentioned above, only the recommended equipment and software were considered for the training phase of the project. Neither Intellikeys nor the trackball, were considered to require extensive training, either for librarians or people with disabilities. EIA, on the other hand, has its own, in-built tutorial which it was important to evaluate. The vast range of options, offered by the Opera browser, meant that it warranted sustained attention during the training phase of the project.

EIA

On the whole, the tutorial on EIA worked very well. After we had trialled it with six participants, there seemed no point in further evaluation. The main problem was that some participants with intellectual disabilities found the tutorial too wordy. Our central recommendation concerning training for EIA, therefore, is that the original EIA tutorial be retained, but that a simpler and less text-based version be drawn up by Rob Seiler, who originally developed the system. We understand that this recommendation has been accepted and that the less text-based version is in the process of development.

Opera

The evaluation of possible training for the Opera browser was tackled not only with participants, but also with public librarians. With the latter group (at Port Phillip Library Service and the Hamilton Headquarters of the Glenelg Regional Library Corporation), Opera was trialled for its utility in public library settings as follows. At both St Kilda, the headquarters of the Port Phillip Library Service and Hamilton Library, a 'regular' version of Opera with some minor modifications was installed. Library staff were asked to work through an online test exercise which presented different configurations, using about a dozen different keystrokes instead of the mouse and, particularly, providing feedback about how such a browser might be used in public libraries. During this process, staff completed an online questionnaire which was automatically emailed back to VICNET and ITNR for analysis. The focus groups picked up the issues from these trials and discussed training approaches, including wider issues about training people with disabilities to use the Internet.

Findings of trials and focus groups involving librarians

Although the browser can be very usefully employed at a basic level, we set out to demonstrate all the features of Opera during the trials, including the complex ones. One overall impression was of the challenges involved in conducting an online trial, with a view of providing pointers for training. Even though extensive briefing information was provided by Larry Stillman, some librarians still faced difficulties. As one of them later wrote:

> 'I found the whole process very confusing and complicated. The browser would definitely NOT be user friendly to a novice. It was not user friendly to someone who has been using computers for years, but is not a programmer.'

This is a salutary warning about the need for human interface in any technology trial.

Even within the focus groups, there was some confusion as to why some pages did not work well (not the fault of the browser, but the actual design of the website). Others found the different terminology used by the browser confusing, as compared to that in Internet Explorer or Netscape Navigator. These issues indicate the need for ongoing technological education of library staff. More

generally, discussion indicated both that users need help even when using a simplified interface such as that provided by Opera, and that librarians need to understand how to show their patrons the ropes. This takes time, a precious resource in public libraries.

On the whole, the focus groups were very positive about the role that adaptive equipment and software could play. One librarian commented:

> ' - I was speaking to one of the co-ordinators [at the council] the other day and there are a lot of older people who particularly don't like to come [to the library] and use the Internet or computers because there are too many young kids running around. So if you gave them an extra incentive to come and use something like this [Intellikeys and Opera] it could be really good at getting some people in [to the library] who are missing.'

The consensus also was that Opera would be a very useful browser in the library situation.

Methods of assisting librarians and library users with Opera were explored. Discussion centred firstly on the ways in which librarians can be trained. At Hamilton, there was a strong feeling that the best option for them is for State Library of Victoria (SLV)/VICNET staff to visit for training sessions. However, since Opera is only one of many products used and it, like other software, undergoes upgrades, it is unrealistic to expect general library staff to remember every aspect of the product on an active basis. Ongoing training and support is important so that Opera does not metaphorically sit in the corner gathering dust.

Apart from training visits, training methods discussed for librarians and library users were: online tutorials, printed manuals and prompt cards. Port Phillip staff suggested that an Opera tutorial with hands-on exercises would be useful for them when learning how to manipulate the browser's settings. The idea was also put forward that such knowledge be broadly based within the organisation, rather than the preserve of a few individuals since, as one focus group participant said: 'It would be more sensible if staff knew the basic functions rather than one or two staff knew how to program the entire thing.' A printed manual had already been developed at the library to introduce new users to the Internet, and was currently being revised; there was interest in a similar hard copy manual for Opera.

Generally there was strong support for the idea of a prompt sheet - possibly to be placed on a stand next to the computer. In the Port Phillip focus groups, which were held before the one in Hamilton, a brain-storming session discussed what should be included on the prompt sheet. One proposal was that the sheet show some specific key steps for Opera, as well as some basic points about using the World Wide Web, e.g., clicking into a search box - perhaps in a double-sided format. The point was also made that desk space and the size of PCs must be considered when designing the prompt card, so that new users would not feel overwhelmed.

As result of the Port Phillip focus groups, ITNR staff prepared a colourful chart which included the Opera buttons, the equivalent key strokes and the function which was performed by using the keys.. This prompt sheet was then discussed in the Hamilton focus group. One suggestion was to highlight the keys responsible for adjusting font size on the screen. While some present wanted pointers provided about general Internet navigation, there was also concern that the prompt sheet not become cluttered with information, and not have 'too much on it as it gets too busy and hard for people to find what they want'. The Hamilton group also suggested that, alongside a small printed manual for patrons, an online Opera tutorial should be available for staff. The latter could include a help link so that staff could follow up specific queries with those who had trained them.

Training trials with individuals with disabilities

These trials were used to determine the features of Opera with which people need the most assistance. It was clear that the buttons need explanation. On the other hand, the plus and minus keys are very readily understood. The turning off and on of style sheets and images are also easily accomplished, but problems with some web sites can occur.The feedback from the people with disabilities, who were included earlier in the training phase, was also used for the design of the

prompt sheet which was trialled with later participants. As a result, a number of adjustments to this prompt sheet will be made.

User Customisation Issues

The importance of library staff customising Opera to match the individual needs of users was noted:

> 'I think considering we are trying to increase Internet access for patrons with physical or visual disabilities, getting staff to set up a browser for a patron is a justified use of staff time. It seems a fairly easy process...the most time would be taken in customising the browser to suit the individual.'

On the other hand, other staff did not feel that this was realistic:

> 'I would say it is not practical unless library management were prepared to set aside practical time periods for librarians to assist fully those using the system. This does not occur even with our own Internet/word processing area for the public and I am sure that other libraries are in a similar staffing situation.'

Larry Stillman, Co-ordinator, Accessibility and Evaluation Unit, VICNET, earlier this year, won the Gorman scholarship which he will use to develop pre-figured versions of Opera suitable for different levels of sight disabilities. These will be trialled, at the minimum, with appropriate library users at Port Phillip and, possibly, through some focus groups of librarians at the State Library. These pre-configured versions of Opera will obviate the need for library staff to have more than basic knowledge of the Opera browser.

A recent ITNR forum at SLV(August 2000) provided further food for thought on the training issues facing librarians and patrons alike. From an audience of more than sixty professionals, many of whom were library staff, discussion focussed upon the practical implications of implementing library-based training for people with disabilities. One university librarian told of adaptive equipment that arrived two months after the initial staff training, a situation that had left many staff feeling in need of a refresher session, particularly in the face of the request by eager users for access to equipment. This concern for refresher courses was echoed by a number of public librarians, one of whom - Michael Byrne, of the SLV - argued for a rolling process of peer training amongst staff. A librarian from a regional council added that without such training, adaptive equipment ran the real risk of 'gathering dust in the corner', and suggested that some software, such as JAWS, might prove too complex for use in a public library setting. A technical support officer at a Melbourne university similarly highlighted some of the problems that can arise if systems staff are not provided with training when called upon to install adaptive equipment or software. Finally, a number of staff from disability organisations described the training packages they had begun to develop both to help their members access the Internet, and aid those involved in computer training to work better with learners with disabilities.

Training recommendations

As the previous discussion has demonstrated, adaptive equipment and software can significantly improve Internet access for people with disabilities, and public libraries have an important role to play in that process. At the same time, the implications on the training front are many, and must be thought through carefully. Some of the points which follow have been influenced by the work of Amtmann and Cook (1999) who undertook a similar project to ours in Washington State, USA; others have emerged from the SLV/ITNR research project.

Having looked very intensively at training, we believe that prescriptive training packages are very difficult to compile. There are too many variables: people and their disabilities, different browsers, frequent changes and upgrades to browsers, and a variety of adaptive equipment and software. This means that the 'content' of training will need to vary greatly. Many of the disabled participants in our study clearly required one-on-one training, adjusted to their particular needs and disabilities. We believe that the most helpful approach was for us to develop prompt sheets - one for basic

Internet information, and one for the browser, Opera, which we investigated extensively, both in terms of its suitability for the library context, and the associated training requirements. Along with other training 'content', these prompt sheets will need to be adjusted as changes to browsers occur. The closest we have come to a 'training package' is for the Opera browser and is targeted at librarians.

In terms of general advice to public librarians - about ways to approach and assist people with disabilities - we found that an excellent kit (*Disability Awareness Kit* 1998) had already been developed by Royal Victorian Institute for the Blind (RVIB), after community consultation. This is available to use as a general training package to assist staff in dealing with people with disabilities. The kit, which is available from SLV, discusses general disability issues, print disability and vision impairment, hearing impairment, physical disability and intellectual disability. It focuses on information relevant to public librarians such as interpersonal interaction, development of relevant collections and issues relating to accessing facilities and collections. We recommend this kit highly. Standards related to all aspects of disability services in public libraries are available in the *Mainstreaming Disability Services* - (2000) report, the outcome of another SLV project.

It is not only in terms of supplying background information that disability organisations can assist in improving access in public libraries. As we have suggested above, many disability organisations have already devoted considerable thought and energy to exploring the ways in which the Internet can be opened up to their constituents. Given this, we believe that public libraries and disability organisations make for natural allies in the realm of online access and equity. Going further, we would argue that much could be gained by both parties - in terms of expertise, equipment, and patrons - were libraries to seek an ongoing relationship with local disability organisations.

Access policies

Library service policy is another area that must be addressed, after suitable adaptive equipment and software have been selected for people with disabilities to use in the public library setting. Within the library itself, policies will need to be developed, not only to ensure the provision of training, but also to regulate the use of equipment, and priority of access by various patrons. It is logical that such guidelines be developed within the broader framework of each public library's general 'access' policies. Libraries can and should develop means to evaluate the effectiveness of any policies and programs initiated to improve access (e.g., Has the program resulted in more use of the Internet in the library by people with disabilities? By what groups? What disability organisations have become involved? How are access policies working? Are training components working well?)

Key project recommendations, in summary

- Adaptive equipment and software need to be selected with great care for a public library setting, not only to be suited to a range of different disabilities, but also to be practical and easy for librarians to support. The project has produced guidelines for this process, as well as recommendations for state-of-the-art equipment and software available at the time the project was undertaken.
- Attention needs to be paid to associated accessibility issues in libraries, e.g., the provision of adjustable computer desks to accommodate wheel chairs of various sizes, and location of computers to allow enough space for the movement of wheel chairs.
- Disability awareness kits can play a valuable role in providing library staff with increased insight and confidence when working with people with disabilities. The kit produced by the RVIB is a fine example of such materials.
- Library staff will require training and reference guides in order to use adaptive equipment and software effectively. In this regard, Larry Stillman is currently developing a manual - both online and in hard copy - for use with Opera.
- Partnerships with local disability organisations should be established, both to ensure that communication is an ongoing process, and to facilitate peer group training for adaptive equipment and software

- Library policies are needed to improve and regulate access to online services for people with disabilities in public libraries. These policies need not only to deal with training issues, but should also regulate the use of adaptive equipment and software - setting out time limits and priorities amongst various users. These policies should be integrated with other 'access' policies. The effectiveness of library policy, with regard to disability access, should in turn be the subject of a simple but regular evaluation process.

Footnotes

1. A video outlining the method used for the project and illustrating some suitable adaptive equipment is available from Information and Telecommunications Needs Research at Monash University (Phone: 03 9903 2322 or email: itnr@sims.monash.edu.au)

2. More detailed papers about the 'evaluation of equipment' stage of the project are available on the ITNR web site: http://home.vicnet.net.au/~itnrn/

3. See Williamson, K., Stillman, L., Bow, A., and Schauder, D. (1999), 'Guidelines for a flexible public online workstation for people with disabilities'. Paper presented at OZCHI Conference, held at Charles Sturt University, November 1999.
http://home.vicnet.net.au/~itnrn/reports/flexibleworkstation.htm

References

Astbrink, G. (1995) 'Will people with disabilities be riding the 'Information Superhighway' or be left on a side street?' *DEAC News*, February, pp.13-15.

Australian Bureau of Statistics (1998) *Disability, Ageing and Carers: Summary of Findings.* Melbourne: ABS.

Broadband Services Expert Group (1995) *Networking Australia's Future*, Final Report of the Broadband Services Expert Group. Canberra: Australian Publishing Service.

Disability Awareness Kit (1998) A training resource for public library customer service staff. Melbourne: Royal Victorian Institute for the Blind/Arts Victoria.

European Commission DGXIII (n.d.) *Critical Factors involved in End-Users' Education in relation to Assistive Technology*, Project D3402 EUSTAT.

Harris, C. (nd) 'Level field'. *Internet Magazine.* www.emap.com/internet/features/disabled.htm. Cited by Blake, M. (1998) *The Internet and Older People.* Wetherby, West Yorkshire: British Library Research and Innovation Centre.

Johnson, L. and Moxon, E. (1998) 'In whose service? Technology, care and disabled people: the case for a disability politics perspective'. *Disability & Society*, 13 (2), pp.241-258.

Mainstreaming Disability Services in Victorian Public Libraries - Report, Recommendations and Key Performance Indicators (2000). Melbourne: RVIB [Online] http://www.libraries.vic.gov.au

Newell, C. (1994) 'People with disabilities and the information society'. In *Population Papers and Policy Issue Discussion Papers.* Melbourne: Telecom Australia.

Royal National Institute of the Blind (1998) *The Internet and how to access it.* Peterborough: RNIB. Cited by Berry, J. (1999) 'Apart or a part?: Access to the Internet by visually impaired and blind people, with particular emphasis on assistive enabling technology and user perceptions'. *Information Technology and Disabilities,* 6 (3), pp 1-16. [Online] http://www.rit.edu/~easi/itd/itdv06n3/article2.htm Access date 11.9.00.

Seale, J.K. (1998) 'Two perspectives on the language of special needs computing: towards a shared view'. *Disability and Society*, 13 (2), pp.259-267.

St Clair, Jen, Muir, Jan and Walker, Adrian (1996) 'Digital technologies in Australian homes'. Paper presented at Communications Research Forum 1996, hosted by the Bureau of Transport and Communications Economics, 28-29 October, Melbourne.

Wolstenholme R. and Stanzel, J. (1997) *Communications Technology: Information and Access Issues for People With Disabilities*. Armidale, NSW: The Rural Development Centre, University of New England.

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